

REMARKS

The Office Action mailed on October 10, 2003, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1-24 were pending in the present application. By this paper, Applicants cancel claims 7-8, and 23-24 without prejudice or disclaimer, and do not add any claims. Therefore, claims 1-6 and 9-22 are now pending in the present application.

Applicants respectfully submit that the present application is in condition for allowance for the reasons that follow.

Interview of December 16, 2003

Applicants thank Examiner Roberts and Supervisor Milano for extending the courtesy of an in-person interview to Applicants' representative on December 16, 2003, where it was agreed that if acceptable language was inserted into the independent claims to clearly differentiate the function of any tension force in Erlebacher with the function of the tension force according to the present inventions, the claims would be allowable, and that the rejections under 35 U.S.C. §112 can be overcome by adding the objected elements into the specification.

Indication of Allowable Subject Matter

Applicants thank Examiner Roberts for allowing claims 9 and 10, and presumably indicating that claims 4 and 5 contain allowable subject matter.

Reference Characters

Reference characters have been retained in the claims but have no effect on the claim scope per MPEP § 608.01(m)

Rejoinder

Applicants note that claim 6 is dependent from a claim that has been identified as a generic claim, claim 4. Applicants further note that claim 4 has been indicated as containing allowable subject matter. Thus, Applicants respectfully request that claim 6 be rejoined for consideration and allowance.

Applicants, of course, continue to reserve the right to file one or more divisional applications covering any non-elected subject matter.

Claim Rejections Under 35 U.S.C. §112 first and second paragraphs

In the Office Action, Claims 12-24 are rejected under 35 U.S.C. §112, first and second paragraphs. Specifically, the Office Action asserts that the original claims and specification do not recite a) a “movement direction reverser,” b) a “retractor,” c) a “tension force,” d) an “outer feed boom,” e) an “inner feed boom,” and f) a “pusher,” and thus these recitations were not described in the specification in such a way as to reasonably convey that the inventor had possession of the invention, and that these terms are not disclosed in the specification.

As seen above, Applicants have amended the specification to include these terms, and thus request reconsideration of the second paragraph rejection.

Further, Applicants respectfully traverse the grounds for the first paragraph rejection. Applicants rely on MPEP §2106(V)(B), entitled “Determining Whether the Claimed Invention Complies with 35 U.S.C. §112, First Paragraph Requirements,” subsection 1, which states, immediately after discussing the “reasonable conveyance” requirement (see Office Action) that the “claimed invention subject matter *need not be described literally*, i.e., *using the same terms*, in order for the disclosure to satisfy the description requirement.” (Emphasis added) Applicants respectfully submit that the claims of the present invention find sufficient written description in the as-filed specification, as was agreed in the interview of December 16, 2003.

Claim Rejections Under 35 U.S.C. §103(a)

In the Office Action, Claims 1-3 and 7-8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Erlebacher (USP 5,350,399) in view of Sugarbaker (USP 5,928,264). Applicants have cancelled claims 7 and 8, and incorporated those recitations into claim 11, and amended the independent claims to recite that the stretching force/tension force “induces” the pushing movement. Applicants respectfully traverse the rejection as to the claims above, and submit that these claims are allowable for at least the following reasons.

Applicants rely on MPEP § 2143, which states that:

[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

It is respectfully submitted that at least the first and third criteria of MPEP § 2143 have not been met in the Office Action.

The Cited References Do Not Suggest All Claim Recitations

Even if the first requirement of MPEP § 2143 was satisfied in the Office Action (which it is not, as explained below), the cited references still do not meet the third requirement, which is that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.”

Neither Erlebacher nor Sugarbaker, alone or in combination, disclose, teach or suggest a device or method for closing a wound according to the present invention. Specifically, neither reference teaches a device adapted to convert movement of a wound closing tool away from the wound to a pushing movement to move a proximal plug member in a direction towards a distal plug member, where **the pushing movement is induced by a stretching force.**

The wound closing tool according to the independent claims is configured to close a wound by moving a proximal plug member positioned outside the vessel towards a distal plug member positioned inside a vessel (as exemplary illustrated in Figs. 1 and 2 of the specification) by pulling the tool away from the distal plug member. By way of exemplary embodiment, when the tool is pulled away from the wound, a stretching force or a tension force is imparted into the retracting means (e.g., the suture 6). This tension force induces a rotation on the gears of the gear mechanism because the plate on which the gears are rotateably mounted interfaces with the retracting means to resist movement of the plate away from the wound. The rotation then imparts a force on cogs 163 that pushes the proximal plug member in the opposite direction from the pulling movement of the tool because the cogs 163 interface with the gears on the opposite side from the racks 170 (see Fig. 9). Thus, the stretching force/tension force in suture 6 **induces the pushing movement.**

In contrast, the device of Erlebacher functions much like a rivet gun. That is, by *squeezing* the trigger 28, the positioner member 26 is actuated *forward* via a lever action, collapsing the occluder 13 in position. Assuming *arguendo* that there is a tension force in the guide 12, this tension force **does not induce** the movement of the positioning member 26 forward. Indeed, any tension force in Erlebacher **is a result of** the movement of positioner member 26 forward, but still only **after** the occluder 13 hits the teeth of the guide 12. That is, any pushing movement in the Erlebacher's device is induced by the movement of the trigger, and is not induced by a stretching force in the guide 12, as any tension force in Erlebacher only develops after the positioner member 26 moves forward.

The Sugarbaker reference does nothing to remedy the above discussed deficiencies of Erlebacher. In Sugarbaker, all movement of the device results in the actuation of a component without movement of the device away from a wound or the application of force in a direction away from a wound.

In sum, even if the first requirement of MPEP § 2143 is satisfied, the third requirement of MPEP § 2143 is not satisfied in the Office Action, since neither reference teaches or suggests each and every element of the present invention. Thus, claim 1 and its dependencies and claim 11 are allowable.

Lack of Suggestion or Motivation to Modify or Combine the References

MPEP § 2143.01, subsection 6 states that “the proposed modification cannot change the principle of operation of a reference – If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959).” That is, a reference cannot be modified if the modification changes the principle of operation of the reference.

The present invention operates by converting a movement of the tool in a proximal direction away from the wound to a pushing movement in a direction towards the wound. As discussed above, neither of the cited references operate in this manner; both having a rotational movement either as the input movement or the resulting movement. With this in mind, it is respectfully submitted that modifying either of the cited references to utilize the gear arrangement or direction reverser claimed in the present invention would change the principle of operation of the cited references. Therefore, the teachings of the cited references are not sufficient to render the claims *prima facie* obvious, and claim 1 and its dependent claims are allowable.

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Applicants incorporate all prior arguments relating to the allowability of pending claims into this response by reference.

The Allowability of Claims 12-22

As seen above, applicants have amended independent claims 12, 19 and 22 to include the recitation that the pushing movement is induced by a tension force in the retractor. Thus, these claims are allowable for at least the reasons that make claim 1 allowable. Reconsideration and allowance is respectfully requested.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

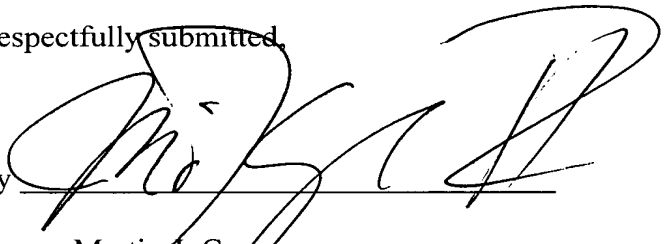
Examiner Roberts is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

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Respectfully submitted,

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